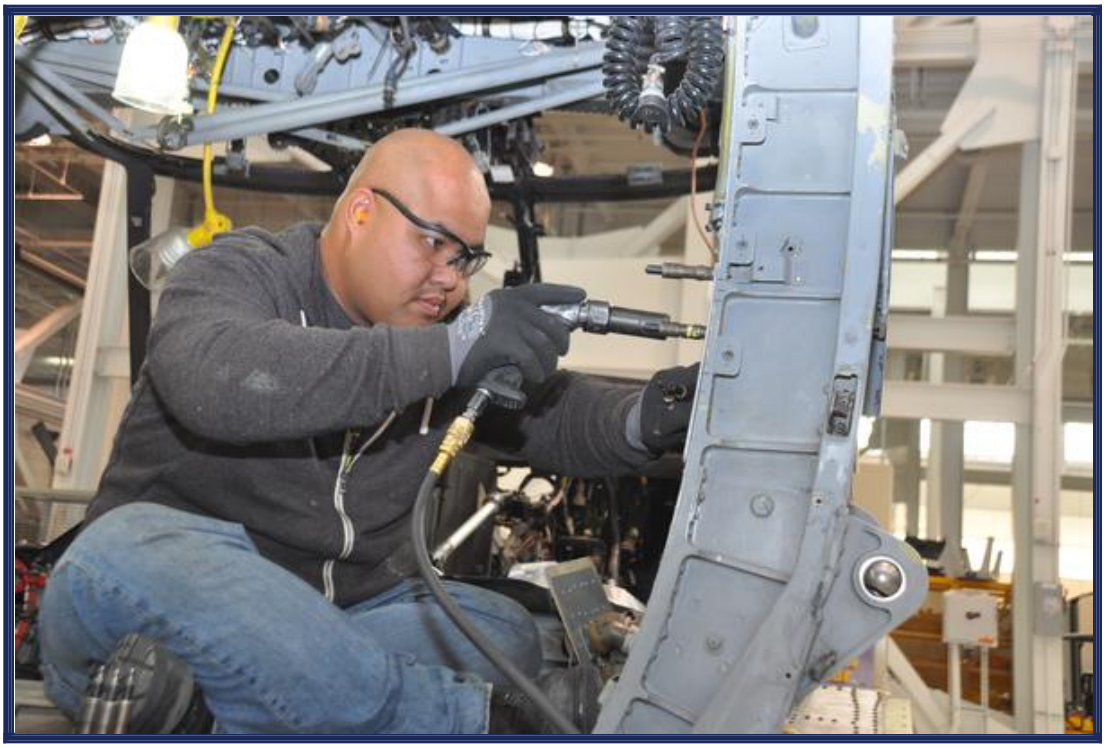
February 2, 2017

FRCSW H-60 Facility Increases Seahawk Throughput



Sheet metal mechanic Kris Dipraseuth repairs a structural crack near the gunner's side window of an H-60 Seahawk in Building 325 at FRCSW. (U.S. Navy photo)

NAVAL AIR STATION NORTH ISLAND, Ca -Since opening its new H-60 Seahawk maintenance, repair and overhaul (MRO) facility in Building 325 just over one year ago, the Fleet Readiness Center Southwest (FRCSW) helicopter program has gained operational efficiencies and staffing improvements that will send about 10 more aircraft to the fleet every year.

The intention to consolidate H-60 MRO operations from Buildings 306, 308, 310 and 333 began with a ceremonial ground breaking in December 2012.

"Our quality assurance (department) was in Building 378 and our production control was in PS 154. We were literally spread out on the northern half of this island," said Deputy Integrated Project Team H-60/MQ-8 Lead Travis Cooper.

"Simple things like writing discrepancy work orders would go from Building 306 to 154 to 378 and back to 306. It would take a day to get one written; or half a day if I walked it through personally. Now, all of those groups are here so this procedure can be done in minutes."

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Cooper noted that multiple work orders may be required per aircraft, and that each undergoes the same processing route. Work orders are created and submitted as flaws or damages are discovered. They are not held for processing in groups.

Since transferring to Building 325, H-60 staffing increased by approximately 25 artisans, primarily aircraft and sheet metal mechanics, while the examiners and evaluators staff (E&E) doubled from seven to 14.

“The biggest reason for that is because in Buildings 306 and 308 we had a single-piece flow system, so aircraft went from one disassembly cell to wash, to one E&E cell to repair, and back to assembly,” he said.

“Now, we basically have two lines working: So we have two disassembly cells, two E&E cells, sending them over to particle media blast (PMB) every three days, and coming to eight repair cells and five assembly cells versus three.”

The H-60 MRO program applies the Integrated Maintenance Program (IMP) to assess and ensure the structural integrity of the MH-R and MH-S models of the H-60 airframe.

Under the IMP, aircraft undergo a Planned Maintenance Interval-One (PMI-1) or 2 cycle. PMI cycles are performed in two, three-year intervals. PMI-1 is done at the end of the first three-year cycle, and PMI-2 the following three years.

PMI work is divided into six sections or zones of the aircraft: zone one covers the aircraft cockpit; zone two, the cargo bay; zone three, the aircraft’s fuel system and where the tail cone attaches to the fuselage; zone four covers the tail cone; zone five, the tail pylon and tail rotor; and zone six, the upper deck of the helicopter and main rotor.

Cooper noted that not all zones of the aircraft are covered during both PMI cycles.

The primary difference between the two cycles is that during PMI-2 the helicopter’s engine and transmission are removed, the rotor heads and transmission serviced, and the aircraft is stripped and painted. Conversely, zone three (fuel system and its hoses) is serviced during PMI-1 but not PMI-2.

As the PMI induction begins, the identified zones of the aircraft are disassembled and the E&Es inspect the zones and components for damage and wear. The E&Es also determine the scope of repairs, and assign depot-level work to FRCSW, and organizational-level (O-level) work to the aircraft’s squadrons.

Degraded avionics equipment, like the aircraft weapons replaceable assembly, is returned to the squadron for replacement.

“The induction is to get the baseline to determine what condition the aircraft is in. When we’re ready to return it we’ll do an acceptance test, and if there’s anything different, we’ll

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know that it was something that was affected while the aircraft was here --- like if one of our artisans accidently drilled through a wire we'll be able to catch that and repair it," Cooper said.

Depending on the condition of an aircraft, PMI processes within the cells strive to achieve specific turn-around times (TAT).

"We're on a six-day TAT," Cooper said. "Disassembly and E&E gets six days, but repair gets 24 days because they have the number of cells that afford them that time. Repair has eight cells, because their workload is dependent on the discrepancies that are found."

Although out of the scope of the IMP, in-service repair (ISR) work is handled on major components, like cracked transmission beams, under a separate work order. ISR work in the H-60 program totaled approximately 14,500 manhours last year, Cooper noted.

In addition to IMP and ISR work, modifications and upgrades are also sizable portions of workload.

One current modification is the replacement of an outside beam from aluminum to titanium to stop a crack near the forward portion of the cabin door on H-60-S models.

"The first time these cracks were discovered was a few years after the aircraft was received," Cooper said. "A temporary repair was made, and now a titanium beam is being added. Each of these mods requires about 3,000 manhours and we're scheduled to do seven of them per year."

An avionics systems upgrade modification is also underway in the program. It requires about 800 manhours per system, he said.

Between the IMP, ISRs and modifications, Cooper said that work in H-60 program is projected to exceed 250,000 manhours this year.

"Our goal will be to get out 65 IMP aircraft a year: or 200 aircraft every three years," he said.

The H-60 program will soon relocate its hard-point and laser alignment fixture from Building 333, install additional shelving for storage, and setup 16 new wraparound stands to enhance artisan safety and protect the aft side of the aircraft transition section during servicing.

With 110,627 square feet of building to work with, all that stuff should fit.

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